From: Kleinmaier, Danielle
To: Zintek, Lawrence
Cc: Carolyn Persoon (persoon.carolyn@epa.gov); Schupp, George
Subject: RE: PFAS Samples
Date: Friday, April 26, 2019 5:54:00 PM
Attachments: B19D047PFASR6 sequence contamination.pdf

After evaluating the contamination we saw in the sequence for WO 1904036 (instrument report attached), I have no idea where the contamination came from. We're having problems with PFHpA, PFOA, PFOS, PFDA, PFBS, and PFUnA. My investigative summaries are below. I was really hoping it was Larry's lab coat, but the data didn't correlate. It also doesn't appear to be carryover from previous samples (which could potentially happen reusing the luer lock syringes and the glass stir rods).

Maybe it was just a one-off? Larry, can you remember doing or touching anything unusual during prep on Thursday (4/25)? Did you open anything new (new package of 15 mL Falcon tubes, new box of LC vials, new bag of LC vial caps, new bottle of methanol)?

We'll have to run some tests on Monday to ensure we're clean and PFAS-free again. No field samples were prepared today and yesterday's samples will have to be re-prepared to ensure the field results are real/reliable, so WOs 1904036 (re-batched) and 1904037 (arrived Friday) will have to be prepared/analyzed on Monday.

Red Kap lab coats:

PFAS Analyte	Conc. (ppt on-column), avg.
PFOS (extrapolated)	1180
PFBA	73.0
PFHpA	64.4
PFPeA	39.3
PFHpS	35.2
PFTreA	34.5
PFHxA	14.7
PFDA	14.2
PFTriA	10.2
PFUnA	9.59
PFHxS	8.18
PFOA	8.03
PFBS	4.36
PFDoA	4.15
PFNA	3.87
PFNS	2.62

Deer Park data (1904033-06):

PFAS Analyte	Conc. (ppt on-column)
6:2 FTS	301
PFOS	35.6
PFHxA	28.3
PFPeA	25.9
PFBA	12.8
PFHxS	12.0
PFHpA	10.7
PFBS	7.28

B19D047 sequence contamination:

PFAS Analyte	Conc. (ppt on-column)
PFHpA	103
PFOA	25.0
PFOS	14.5
PFDA	3.27
PFBS	3.24
PFUnA	2.53

**Analytes sorted high to low by concentration

Preparing batch QC/field samples:	Possible source of contamination?	Evidence from B19D047 sequence
15 mL Falcon tubes	unlikely	no previous contamination issues at this level using same lot # (box) of tubes
turqoise pipette tips	no	RB solution demonstrated clean (made w/turqoise pipette tips)
yellow pipette tips	no	no contamination identified in low level ICAL standards (levels 1 - 3 made with yellow pipette tips); RB solution demonstrated clean (made w/yellow pipette tips)
Acrodisc GxF/0.2 um GHP membrane filter units (rinsed)	maybe	no previous contamination issues at this level using same lot # and rinsing procedure of filter units (unless rinsing reagent lot #s has changed recently)
luer lock syringes (rinsed)	maybe	no previous contamination issues at this level using same syringes and rinsing procedure of syringes (unless rinsing reagent lot #s has changed recently)
glass stir rods, short	maybe	no previous contamination issues linked to glass stir rods (unless dishwashing procedure has changed recently)
LC vials	unlikely	no QC failures in ICAL, SS, RB, CCV; no unusual concentrations in accompanying field sample dilutions
LC vial caps	unlikely	no QC failures in ICAL, SS, RB, CCV; no unusual concentrations in accompanying field sample dilutions
Milli-Q water	no	RB solution demonstrated clean (made w/Milli-Q water)
methanol	no	RB solution demonstrated clean (made w/methanol)
acetic acid	no	RB solution demonstrated clean (made w/acetic acid)
surrogate spike solution	no	no QC failures in BLK1 QC sample, only BLK2
RL spike solution	no	contamination only identified in BLK2 and BSD1; no QC failures in RL check samples
TC spike solutions	no	no QC failures in BS1 QC sample, only BSD1; no unusual concentrations in accompanying matrix spike QC samples
50 mL Falcon tubes	no	RB solution demonstrated clean (made w/50 mL Falcon tubes); no QC failures in ICAL, SS (made in 50 mL Falcon tubes)

From: Zintek, Lawrence
Sent: Friday, April 26, 2019 12:54 PM
To: Griffin, Sylvia <griffin.sylvia@epa.gov>; McQuiddy, David <Mcquiddy.David@epa.gov>; Turner, Philip <Turner.Philip@epa.gov>; Rauscher, Jon <Rauscher.Jon@epa.gov>; Loesel, Matthew <loesel.matthew@epa.gov>; Corey Bercher <Corey.Bercher@WestonSolutions.com>; Warren, Christy <warren.christy@epa.gov>; Adams, Adam <Adams.Adam@epa.gov>; Patel, Anish <patel.anish@epa.gov>; Jeff.Wright@WestonSolutions.com
Cc: Reese, Diane <Reese.Diane@epa.gov>; Kleinmaier, Danielle <kleinmaier.danielle@epa.gov>
Subject: PFAS Samples

All,

The samples we received yesterday were analyzed and upon reviewing the data it was observed that we have PFAS contamination for some anlaytes in the method blanks and sporadic high hits in a very few of the samples. We have to determine where this is coming from before we analyze any more samples. Could be from tubes, vials, pipette tips…….Who knows? This stuff is everywhere.

We will keep you posted.

Sorry,

Larry